

## SYMBOL LIST

|  |                                                               |
|--|---------------------------------------------------------------|
|  | DARK LINE INDICATES CONDUIT OR EQUIPMENT TO BE INSTALLED.     |
|  | LIGHT LINE INDICATES EXISTING CONDUIT OR EQUIPMENT TO REMAIN. |
|  | CONDUIT RUN EXPOSED OR CONCEALED                              |
|  | 5 CONDUITS, RUNNING 2 TIER : 3 CONDUITS OVER 2                |
|  | CONDUIT TURNING DOWN                                          |
|  | CONDUIT TURNING UP                                            |
|  | CONDUIT TO BE REMOVED                                         |
|  | EXISTING SPRINKLER MAIN TO REMAIN                             |
|  | EXISTING DRAIN PIPING TO REMAIN                               |
|  | EXISTING CONDENSER WATER PIPING                               |
|  | EXISTING CURRENT TRANSFORMER & METER TO REMAIN                |
|  | STRUCTURAL TRUSS                                              |
|  | JUNCTION BOX                                                  |

## BUSWAY SCHEDULE (SEE NOTE #3)

| TYPE | MODEL NUMBER                                                    | DESCRIPTION                                                    |
|------|-----------------------------------------------------------------|----------------------------------------------------------------|
| A    | SQUARE 'D' I-LINE BUSWAY #CF2520G-LFM13 OR APPROVED EQUIVALENT  | FLATWISE ELBOW                                                 |
| B    | SQUARE 'D' I-LINE BUSWAY #CF2520G-OF OR APPROVED EQUIVALENT     | OFFSET FLATWISE ELBOW                                          |
| C    | SQUARE 'D' I-LINE BUSWAY #CF2520G-LEM11 OR APPROVED EQUIVALENT  | EDGEWISE ELBOW                                                 |
| D    | SQUARE 'D' I-LINE BUSWAY #CF2520G-SERIES OR APPROVED EQUIVALENT | SPECIAL OFFSET CABLE TAP BOX END OR SIDE ENTRANCE AS REQUIRED. |
| E    | NOT USED                                                        | -                                                              |
| F    | SQUARE 'D' I-LINE BUSWAY #CF2520G OR APPROVED EQUIVALENT        | FEEDER BUSWAY                                                  |
| G    | SQUARE 'D' I-LINE BUSWAY #CF2520G-TFM13 OR APPROVED EQUIVALENT  | TEE FITTING                                                    |
| H    | SQUARE 'D' I-LINE BUSWAY #CF2520G OR APPROVED EQUIVALENT        | PLUG IN BUSWAY                                                 |
| I    | NOT USED                                                        | -                                                              |
| J    | SQUARE 'D' I-LINE BUSWAY #CF2520G-OE OR APPROVED EQUIVALENT     | OFFSET EDGEWISE ELBOW                                          |
| K    | SQUARE 'D' I-LINE BUSWAY #CF2520G-DL(R) OR APPROVED EQUIVALENT  | DOUBLE ELBOW                                                   |

## NOTES:

- CONFIRM ALL EXISTING FIELD CONDITIONS PRIOR TO INSTALLATION.
- PROVIDE SERVICES OF FACTORY ENGINEERS TO FIELD VERIFY EXISTING FIELD CONDITIONS PRIOR TO FABRICATION OF BUSWAYS.
- BUSDUCT SCHEDULE FOR INFORMATION ONLY. ACTUAL DIMENSIONS OF COMPONENTS TO BE FIELD VERIFIED. PROVIDE SPECIAL LENGTHS AND SIZES AS PER FIELD CONDITIONS.
- TRACE ALL BRANCH CIRCUITING AND FEEDERS, IDENTIFIED TO BE REROUTED, DUE TO INSTALLATION OF BUSWAY IN ORDER TO IDENTIFY LOADS.
- ALL BUSWAY REPLACEMENTS SHALL BE PERFORMED AFTER NORMAL WORK HOURS.
- PROCEDURES FOR NOTIFYING THE PORT AUTHORITY ENGINEER OF LOADS, PENDING POWER OUTAGES AND THE HOURS THAT WORK IS TO BE PERFORMED SHALL BE AS INDICATED IN DIVISION ONE, GENERAL PROVISIONS, SUBSECTION "CONDITIONS AND PRECAUTIONS".
- ALL COPPER BUSWAYS SHALL BE SINGLE BUS BAR PER PHASE, 480/277V, 3ø, 4W+G, 2000A.
- REMOVE EXISTING BUSWAYS BETWEEN FLOORS AS INDICATED & INSTALL REPLACEMENT ALUMINUM AND OR COPPER BUSWAY WITH INTEGRAL FIRESTOPS AS SHOWN. COORDINATE LENGTH IN FIELD.
- FURNISH & INSTALL BUSWAYS SUPPORTS AT FLOOR LEVEL FOR COPPER BUSWAYS SUPPORTS TO BE MOUNTED TO EXISTING CURBS.
- ALL CABLE TAP BOXES SHALL BE SUPPLIED WITH TWO REMOVABLE ACCESS COVERS (BOTTOM AND SIDE).
- SUBMIT FULLY DIMENSIONED SHOP DRAWINGS INDICATING ALL ELEVATIONS, DIMENSIONS, AND ROUTING OF ALL BUSWAYS, CONDUITS, PULLBOXES, ETC. AND ALL ASSOCIATED ELECTRICAL WORK.
- ALL CONDUIT SHALL BE RIGID STEEL, GALVANIZED, TYPE GSC, SIZE AS INDICATED. ALL CONDUCTORS SHALL BE COPPER, 600 VOLT, TYPE XHHW, UNLESS OTHERWISE NOTED.
- CLEAN AND REFURBISH ALL SECTION OF EXISTING BUSWAY THAT WILL /BE RE-INSTALLED IN ELECTRIC CLOSET OR OTHER AREA. ALL REMOVED, UNUSED, BUSWAYS SHALL BE TURNED OVER TO THE PORT AUTHORITY.
- ALL REPLACEMENT 1800A ALUMINUM PAIRED PHASE BUSDUCT TO MATCH EXISTING, FURNISH LENGTH AS REQUIRED.
- EXISTING LIGHT FIXTURES, WHICH ARE REQUIRED TO BE RELOCATED, DUE TO A CONFLICT WITH THE INSTALLATION OF THE 2000A BUSWAY AND/OR CONDUITS SHALL BE INCLUDED IN SCOPE OF PROJECT AS A COST ITEM.
- COORDINATE METHOD OF INSTALLATION OF CONDUITS IN PLENUM SHAFT WITH THE ENGINEER. THE ENGINEER MUST APPROVE INSTALLATION METHOD PRIOR TO WORK (I.E. SCAFFOLDING, ETC)
- ALL BUSWAYS, INSTALLED IN ELECTRIC CLOSETS, MUST BE PROVIDED WITH A MINIMUM OF THREE (3) PLUG IN LOCATIONS FOR 225 AMP FRAME CIRCUIT BREAKER INSTALLATION.
- ALL COPPER, 2000A BUSWAYS TO BE SUPPLIED WITH A FULL SIZE COPPER GROUND BUS.
- REFER TO ARCHITECTURAL DRAWINGS FOR FIRESTOPPING OF BUSWAYS AT FLOORS AND PARTITIONS.
- COORDINATE INSTALLATION OF ACCESS DOORS IN ELEVATOR SHAFT WALLS WITH THE PORT AUTHORITY.
- TEST ALL BUSWAYS, BUSWAY CONNECTIONS, AND ALL CONDUCTORS AS PER MANUFACTURERS RECOMMENDATIONS.

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THE PORT AUTHORITY  
OF NY & NJ  
Engineering Program ManagerEDWARDS AND ZUCK, P.C.  
CONSULTING ENGINEERS  
330 West 42nd Street, New York, NY 10036  
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© 1992 Edwards and Zuck, P.C.3/15/01 Drawings of Record  
No. Date Revision ApprovedEngineering Department  
Design DivisionThe World Trade  
Center  
Electrical/HVAC  
Upgrade Program

Title

LOW VOLTAGE DISTRIBUTION  
ONE & TWO W.T.C.  
ELECTRICALSYMBOL LIST, GENERAL  
NOTES, & DETAIL DRAWINGThis drawing subject to conditions in contract.  
All inventions, ideas, designs and methods  
herein are reserved to Port Authority and  
may not be used without it's written consent.CJ/CADD MW/CADD F.J.L.  
Designed by Drawn by Checked byDate 10/4/93 Scale NONE  
Contract Number Drawing Number

WTC-804.041 E-1

FILE NAME: PATED000